

Management of Occupational Blood Exposures to **HBV**, **HCV**, or **HIV**

Step 1 Provide immediate care to the exposure site

- Wash wounds and skin with soap and water
- Flush mucous membranes with water

Step 2 Evaluate the exposure

Determine risk associated with exposure

Exposures

- Exposures** posing risk of infection transmission
 - Percutaneous injury
 - Mucous membrane exposure
 - Non-intact skin exposure
 - Bites resulting in blood exposure to either person involved
 - Concentrated virus

Step 3 Give postexposure prophylaxis (PEP) for exposures posing risk of infection transmission

HBV — see Table

- Give PEP as soon as possible, preferably within 24 hours
- PEP can be given to pregnant women

HCV — PEP not recommended

HIV — see Table

- Initiate PEP within hours of exposure
- Offer pregnancy testing to all women of childbearing age not known to be pregnant
- Seek expert consultation if viral resistance suspected
- Administer PEP for 4 weeks if tolerated

Substances

- Substances** posing risk of infection transmission
 - Blood
 - Fluids containing visible blood
 - Potentially infectious fluids (semen, vaginal secretions, and cerebrospinal, synovial, pleural, peritoneal, pericardial, and amniotic fluids) or tissue
 - Concentrated virus

Step 4 Perform follow-up testing and provide counseling

Advise exposed persons to seek medical evaluation for any acute illness occurring during follow-up

HBV exposures

- Test for anti-HBs 1-2 months after last dose of vaccine given
- Follow-up not indicated if exposed person immune to HBV or received HBIG PEP

Susceptibility

- Determine **susceptibility** of exposed person
 - **Hepatitis B** vaccine status
 - **HBV** immune status if vaccine response status is unknown
 - Anti-**HCV** and ALT
 - **HIV** antibody
- Presence of **HCV** antibody
- Presence of **HIV** antibody
 - For unknown sources, evaluate the likelihood of exposure to a source at high risk for **HBV**, **HCV**, or **HIV** infection
 - Do not test discarded needles



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For more help call the National Clinicians' Postexposure Prophylaxis Hotline (PEPPline) **888-448-4911**
or visit the Postexposure Prophylaxis Management website
www.needlestick.mednet.ucla.edu

Recommended HBV PEP

	Treatment when source is found to be:		
	HBsAg positive	HBsAg negative	Source unknown or not available for testing
Unvaccinated	HBIG ^a x 1 and initiate hepatitis B vaccine series	Initiate hepatitis B vaccine series	Initiate hepatitis B vaccine series
Previously vaccinated			
Known responder ^b	No treatment	No treatment	No treatment
Known non-responder ^c	HBIG x 1 and initiate re-vaccination or HBIG x 2 ^d	No treatment	If known high risk source, treat as if source were HBsAg positive
Antibody response unknown	Test exposed person for anti-HBs ^e 1. If adequate, no treatment 2. If inadequate, vaccine booster and rerecheck titer in 1-2 months	No treatment	Test exposed for anti-HBs: 1. If adequate, no treatment 2. If inadequate, vaccine booster and rerecheck titer in 1-2 months

* Persons who have previously been infected with HBV are immune to reinfection and do not require postexposure prophylaxis.
† Hepatitis B surface antigen.
§ Hepatitis B immune globulin; dose 0.06 mL/kg intramuscularly.
¶ A responder is a person with adequate levels of serum antibody to HBsAg (i.e., anti-HBs ≥ 10 mIU/mL); a non-responder is a person with inadequate response to vaccination (i.e., serum anti-HBs < 10 mIU/mL).
** The option of giving one dose of HBIG and ratiakinating the vaccine series is preferred for non-responders who have not completed a second 3-dose vaccine series. For those who previously completed a second vaccine series but failed to respond, 2 doses of HBIG are preferred. Give one dose at time of exposure, and the second dose one month later.
†† Antibody to HBsAg.

Recommended HIV PEP

Percutaneous injuries	Infection status of the source		
	Exposure type	HBV-positive, Class 1 ^f Asymptomatic HIV infection or known low viral load (e.g., < 1,500)	Source of unknown HIV status (e.g., deceased source from a sharps disposal container) Unknown source (e.g., a needle from a sharps disposal container)
Less severe (e.g., solid needle, superficial injury)	Recommend basic 2-drug PEP	Recommend expanded 3-drug PEP	Generally, no PEP ^g warranted
More severe (e.g., large-bore hollow needle, deep puncture, visible blood on device, or needle used in patient's artery or vein)	Recommend expanded 3-drug PEP	Recommend expanded 3-drug PEP	Generally, no PEP ^g warranted
Mucous membrane exposures and non-intact skin ^h exposures	Infection status of the source		HIV-negative

Exposure type	HBV-positive Class 1 ^f Asymptomatic HIV infection or known low viral load (e.g., < 1,500)	Source of unknown HIV status (e.g., deceased source from a sharps disposal container) Unknown source (e.g., a needle from a sharps disposal container)	HIV-negative
Small volume (e.g., few drops)	Consider basic 2-drug PEP	Recommend basic 2-drug PEP	Generally, no PEP ^g warranted
Large volume (e.g., major blood splash)	Recommend basic 2-drug PEP	Recommend expanded 3-drug PEP	Generally, no PEP ^g warranted

* If using resusci-bag to perform cardiopulmonary resuscitation (CPR), initiation of PEP should not be delayed pending resuscitation and because expert consultation alone cannot substitute for face-to-face communication. Resuscitation should be initiated immediately and continue until a healthcare provider arrives for all measures.
† The designation "Consider PEP" indicates that PEP is optional and should be based on a individualized decision between the exposed person and the treating clinician.
§ If PEP is offered and taken, and the source is later determined to be HIV negative, PEP should be discontinued.
¶ For skin exposures, follow-up is indicated only if there is evidence of compromised skin integrity (e.g., dermatitis, abrasion, or open wound).

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